

The invention has been described in detail with particular reference to preferred embodiments thereof, but it will be understood that variations and modifications can be effected within the spirit and scope of the invention.

We claim:

1. Apparatus for light fastness testing comprising a light source, means for dividing visible light from ultraviolet and infrared radiation, means to direct the visible component of light into a spherical cavity, and means to mount test samples in apertures in the wall in said cavity.

2. The apparatus of claim 1 wherein said cavity is white.

3. The apparatus of claim 1 wherein said cavity is between about 5 and 15 inches in diameter.

4. The apparatus of claim 1 further comprising air circulation means.

5. The apparatus of claim 2 wherein said light source is at least of 500-watt power.

6. The apparatus of claim 1 wherein test samples placed in said apertures have greater than 500K lux of light applied to them.

7. The apparatus of claim 6 wherein between about 500,000 and 600,000 Lux are applied to said samples.

8. The apparatus of claim 1 wherein the material forming said sphere comprises a thermoplastic resin.

9. The apparatus of claim 5 wherein said light source is a collimated light source.

10. The apparatus of claim 1 wherein said spherical cavity has four apertures for mounting test samples.

11. The apparatus of claim 1 further comprising a heat sink for absorbing the ultraviolet and infrared radiation.

12. The apparatus of claim 9 wherein said means for dividing visible light comprises a cold mirror and a heat absorber.

13. A method of light fading comprising providing apparatus for light fastness testing comprising a light source, means for dividing visible light from ultraviolet and infrared rays, means to direct the visible component of light into spherical cavity, and means to mount test samples in apertures in the wall of in said cavity, placing test samples in said apertures, and subjecting said samples to light levels of greater than 500K lux.

14. The method of claim 13 wherein 10 to 20 days of light exposure are carried out that then allow prediction of 20-year color paper fade.

15. The method of claim 13 wherein said cavity is white.

16. The method of claim 13 wherein said cavity is between about 5 and 15 inches in diameter.

17. The method of claim 13 further comprising air circulation means.

18. The method of claim 13 wherein said light source is at least of 500-watt power.

19. The method of claim 18 wherein test samples placed in said apertures have greater than 500K lux of light applied to them.

20. The method of claim 19 wherein between about 500,000 and 600,000 Lux are applied to said samples.

21. The method of claim 13 wherein the material forming said sphere comprises a polymer.

22. The method of claim 13 wherein said light source is a collimated light source.

23. The method of claim 13 wherein said spherical cavity has four apertures for mounting test samples.

24. The method of claim 13 further comprising a heat sink for absorbing the infrared and ultraviolet radiation.

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